

CLAIMS:

1. A device for stabilizing a spinal motion segment comprising: a substantially tubular member constructed from a generally pliable, but minimally elastic material, the substantially tubular member having a first end and a second end, the substantially tubular member defining an interior space and an opening at the first end and the second end, the substantially tubular member having a circumference sized to fit in the immediate vicinity of the outer annulus of the intervertebral disc of a mammalian spine, the substantially tubular member having a central axis, the central axis extending between the first end and the second end, the central axis constructed and arranged to be generally collinear with a cephalo-caudal axis of the mammalian spine when fitted into the immediate vicinity of the outer annulus of the intervertebral disc, the substantially tubular member having a predetermined height and a predetermined thickness.
2. The device of claim 1 wherein the predetermined height of the substantially tubular member, measured along the central axis, is between 0.25 mm and 20 mm.
3. The device of claim 1 wherein the predetermined thickness of the substantially tubular member is between 0.01 mm and 5 mm.
4. The device of claim 1 wherein the material of the substantially tubular member is non-porous.

5. The device of claim 1 wherein the material of the substantially tubular member is porous.
6. The device of claim 1 wherein the material of the substantially tubular member is electrically conductive.
7. The device of claim 1 wherein the substantially tubular member is characterized as a flattened or unflattened tube.
8. The device of claim 1 wherein the substantially tubular member is sufficiently pliable to allow its temporary deformation into an elongated loop, such that the substantially tubular member may be passed through an opening in the outer annulus of the intervertebral disc, wherein the diameter of said opening is generally equivalent to the predetermined height of the temporarily deformed substantially tubular member.
9. The device of claim 8 wherein the material of the substantially tubular member is characterized as having a shape memory such that when the substantially tubular member is sufficiently deformed to be passed through the opening in the outer annulus of the intervertebral disc and inserted into an interdiscal cavity of the intervertebral disc the substantially tubular member will expand itself against the annulus of the disc.
10. The device of claim 9 wherein the material is comprised at least partially of NITINOL.

11. The device of claim 8 wherein the material is selected from at least one member of the group consisting of: polymeric material, metal wire, woven material, braided material, fluid impermeable material and any combination thereof.

12. The device of claim 1 wherein the material of the substantially tubular member includes at least one member of the group consisting of: braided filaments, woven filaments, threads, cords, wires, ropes, suture materials, and any combinations thereof.

13. The device of claim 1 wherein the material of the tubular body is a polymeric material or a cement that hardens after injection to form the main body of the substantially tubular member.

14. The device of claim 1 wherein the substantially tubular member is constructed and arranged to be positioned within a hollowed region of the outer annulus of the intervertebral disc, the first end being immediately adjacent to a first adjacent vertebrae and the second end being immediately adjacent to a second adjacent vertebrae.

15. The device of claim 1 wherein the material of the substantially tubular member further comprises a plurality of pores, the plurality of pores being sized to allow ingress and egress of any materials selected from the group consisting of: liquids, solutions, small particle suspensions, and any combinations thereof, the plurality of pores constructed and arranged to allow ingrowth of bony trabeculae or fibrous elements into and through the device when the

device is positioned in a hollowed region of an intervertebral space, the plurality of pores being sized to retain a fill material within the interior space of the substantially tubular member.

16. The device of claim 15 wherein the plurality of pores are perforations.

17. The device of claim 1 wherein the interior space is filled with compounds intended to stimulate bone growth.

18. The device of claim 1 wherein the material at least partially includes at least one member of the group of substances designed to stimulate bone, cartilage or fibrous tissue growth consisting of: at least one hormone, at least one pharmaceutical agent, at least one type of virus, genetic material and any combinations thereof.